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- **Avian Influenza and the Specter of Pandemic Influenza**
- **Discharging a Patient with Suspect SARS-CoV from the Inpatient or Outpatient Setting**

Avian Influenza and the Specter of Pandemic Influenza

Since December 2003, outbreaks of highly pathogenic avian influenza A(H5N1) among poultry have been reported in Cambodia, China, Indonesia, Japan, Laos, South Korea, Thailand, and Vietnam. Cases of H5N1 influenza have been demonstrated in humans living in many areas where avian outbreaks have occurred. As of February 16, 2004, 28 cases of laboratory-confirmed influenza A(H5N1) virus infections in humans, resulting in 20 deaths, have been reported in Thailand and Vietnam. In addition, approximately 100 suspected cases in humans are under investigation by national health authorities in Thailand and Vietnam. The Centers for Disease Control and Prevention (CDC), the World Health Organization (WHO), the World Organization for Animal Health (OIE), and national health authorities in Asian countries are working to assess and monitor the situation, provide epidemiologic and laboratory support, and assist with control efforts.

Please note, that though there have also been recent reports of avian influenza outbreaks in Delaware, New Jersey, British Columbia and Pakistan, the H7 strain responsible for these outbreaks is considered to have low pathogenicity and is not currently seen as a threat to humans.

The rapid spread of highly pathogenic avian H5N1 influenza, with outbreaks occurring at the same time in several countries, is historically unprecedented and poses a considerable human public health risk because not only can these viruses infect humans, causing severe disease with high mortality, but there is also potential for them to adapt, or recombine with other influenza viruses, and give rise to a pandemic viral strain. The current H5N1 strain circulating in Asia appears to be highly pathogenic for humans, and immunity in the human population is generally lacking. However, the strain has not been shown to be easily transmitted between humans, and sustained person-to-person transmission has not occurred. If the virus continues to circulate widely among poultry, it has a greater potential to infect humans and other animals (such as pigs), where genetic re-assortment could take place and create a new pandemic strain.

The majority of the human H5N1 cases are apparently associated with direct exposure to infected birds or to surfaces contaminated with excretions from infected birds. A family respiratory illness cluster in Vietnam suggests the possibility of limited person-to-person transmission.

Current Recommendations for Healthcare Providers

The clinical presentation and travel history of persons with influenza A(H5N1) or SARS-CoV infection may overlap. A complete travel and epidemiological (exposure) history should be taken from persons presenting with respiratory infections. Public Health and hospital infection control should be notified when patients meet screening criteria for SARS or avian influenza. For current SARS screening criteria, see: www.metrokc.gov/health/sars/screening.htm

All patients who present to a health-care setting with fever and respiratory symptoms should be managed according to recommendations for respiratory hygiene and cough etiquette (www.cdc.gov/flu/professionals/infectioncontrol/resphygiene.htm). Isolation precautions identical to those recommended for SARS should be implemented for all hospitalized patients diagnosed with or under evaluation for influenza A(H5N1).

Testing for influenza A(H5N1) is indicated for hospitalized patients with:

- Radiographically confirmed pneumonia, acute respiratory distress syndrome (ARDS), or other severe respiratory illness for which an alternate diagnosis has not been established, **AND**
- History of travel within 10 days of symptom onset to a country with documented H5N1 avian influenza in poultry and/or humans (for a listing of current H5N1-affected countries, see the OIE Web site at www.oie.int/eng/en_index.htm and the WHO Web site at www.who.int/en/).

Testing for influenza A(H5N1) should be considered on a case-by-case basis, in consultation with Public Health, for hospitalized or ambulatory patients with:

- Documented temperature of >38°C (>100.4°F), **AND**
- One or more of the following: cough, sore throat, shortness of breath, **AND**
- History of contact with domestic poultry (e.g., visited a poultry farm, household raising poultry, or bird market) or a known or suspected human case of influenza A(H5N1) in an H5N1-affected country within 10 days of symptom onset.

Laboratory Guidelines for H5N1 Influenza

Highly pathogenic avian influenza A(H5N1) must be worked with under Biosafety Level (BSL) 3+ laboratory conditions, including controlled access double door entry with change room and shower, use of respirators, decontamination of all wastes, and showering out of all personnel. The same BSL 3+ laboratory guidelines are recommended for conducting virus isolation for SARS-CoV. **CDC recommends that laboratories not culture influenza virus from patients suspected to have H5N1 influenza unless stringent BSL 3+ conditions can be met**. Therefore, respiratory virus cultures should not be performed in most clinical laboratories and such cultures should not be ordered for patients suspected of having H5N1 infection. **Clinical specimens from suspect A(H5N1) cases and SARS-CoV cases may be tested by PCR assays using standard BSL 2 work practices in a Class II biological safety cabinet. In addition, commercial antigen detection testing can be conducted under BSL 2 levels to test for influenza.**

Discharging a Patient with Suspect SARS-CoV from the Inpatient or Outpatient Setting

Most of the information that has been shared about SARS in previous issues of the *EPILOG* has been related to the surveillance and diagnosis of SARS patients. Developing guidelines for managing suspect SARS-CoV Patients *as they leave the inpatient or outpatient setting* is the next challenge.

Several factors should be considered when planning to send a suspect SARS-CoV patient home from either an inpatient or outpatient setting. To minimize any potential for transmission of SARS in the community once a patient leaves the healthcare facility, **it is essential that hospitals and outpatient facilities (including emergency departments) coordinate discharge planning with Public Health before sending a patient with suspect SARS-CoV home.** Outlined below are some issues to consider when planning how suspect SARS-CoV patients should be discharged, along with links to documents Public Health has created for suspect SARS-CoV patients, their caregivers, and other household members:

Home Isolation

Suspect SARS-CoV patients are considered infectious, and should remain in isolation, for 10 days following the resolution of fever and improvement in respiratory symptoms. Before discharging a SARS patient, the patient's home and living situation will need to be assessed for suitability for home isolation. A checklist called "Guidelines for Evaluation of Home Isolation for SARS-CoV Cases" will be completed by Public Health, or a trained hospital staff member, (such as a discharge planner or nurse in outpatient settings). Based upon the information collected in the checklist, a determination can be made whether the patient can be safely discharged to home isolation. Sometimes an in-home assessment is also necessary and will be conducted by Public Health. The home assessment checklist is designed to determine if the home physical environment is appropriate for isolation, if patient and caregivers can follow infection control practices, that others in the home will not be placed at undue risk, and that the basic needs of the patient can be met during the isolation period.

Order for Voluntary Isolation

An Order for Voluntary Isolation will be issued to suspect SARS patients before discharge from in- or out-patient healthcare facilities. This is a legal document, signed by the Health Officer, which explains that the patient is asked to remain isolated in the home until Public Health deems that he or she is no longer contagious.

Instructions and Resources for SARS Patients, Their Caregivers and Other Household Members

Public Health has developed "SARS Patient Discharge Instructions", and instructions for "Infection Control During Home Isolation for SARS-CoV Disease". These documents explain to the patient and household members what is expected during home isolation, how to get assistance with social needs, how to contact Public Health, how they will be monitored for symptoms, and how to perform infection control measures, including hand washing, and technique for wearing and removing gloves and masks, etc.

In order to determine when the patient can be released from home isolation, Public Health will continue to monitor them for symptoms. Close contacts of a suspect SARS patient, including household members, will also need to be monitored for symptoms. To help the patient and household members keep track of their temperature and symptoms, Public Health has developed a symptom log to be used by the patient and household members.

To enable suspect SARS patients and household members to practice good infection control, and to monitor their temperature, Public Health is putting together "SARS Home Isolation Kits". These kits will include such items as single-use oral thermometers, hand soap, alcohol hand gel, gloves and masks.

Public Health will be putting many of these documents (except for the Order for Voluntary Isolation) on our SARS webpage at: www.metrokc.gov/health/sars/index.htm.

If you have questions or comments on discharge planning for suspect SARS patient, please contact Laurie Stewart at (206) 296-2735.

Disease Reporting

AIDS/HIV ..... (206) 296-4645
STDs ..... (206) 731-3954
TB (206) 731-4579
All Other Notifiable Communicable Diseases (24 hours a day) .... (206) 296-4774
Automated reporting line for conditions not immediately notifiable ..... (206) 296-4782

Hotlines

Communicable Disease ..... (206) 296-4949
HIV/STD ..... (206) 205-STDS

Online Resources

Public Health Home Page: www.metrokc.gov/health/
The *EPI-LOG*: www.metrokc.gov/health/providers
Subscribe to the Public Health Communicable Disease listserv (PHSKC INFO-X) at:
http://mailman.u.washington.edu/mailman/listinfo/phskc-info-x

Reported Cases of Selected Diseases, Seattle & King County 2004

	Cases Reported in January		Cases Reported Through January	
	2004	2003	2004	2003
Campylobacteriosis	17	16	17	16
Cryptosporidiosis	1	2	1	2
Chlamydial infections	388	368	388	368
Enterohemorrhagic *E. coli* (non-O157)	0	0	0	0
***E. coli* O157: H7**	0	4	0	4
Giardiasis	13	13	13	13
Gonorrhea	112	129	112	129
***Haemophilus influenzae* (cases <6 years of age)**	0	0	0	0
Hepatitis A	0	2	0	2
Hepatitis B (acute)	2	3	2	3
Hepatitis B (chronic)	34	54	34	54
Hepatitis C (acute)	0	0	0	0
Hepatitis C (chronic, confirmed/probable)	111	119	111	119
Hepatitis C (chronic, possible)	34	25	34	25
Herpes, genital (primary)	54	60	54	60
HIV and AIDS (includes only AIDS cases not previously reported as HIV)	18	33	18	33
Measles	0	0	0	0
Meningococcal Disease	4	1	4	1
Mumps	0	0	0	0
Pertussis	23	15	23	15
Rubella	0	0	0	0
Rubella, congenital	0	0	0	0
Salmonellosis	17	24	17	24
Shigellosis	16	8	16	8
Syphilis	5	8	5	8
Syphilis, congenital	0	0	0	0
Syphilis, late	4	2	4	2
Tuberculosis	8	10	8	10

The *Epi-Log* is available in alternate formats upon request.